

In the Claims:

1. (Currently Amended) A hip prosthesis, comprising a shaft which is configured to be anchored in a medullary canal of a femur and has a distal portion which is configured to be anchored in a diaphysis,

the shaft having a core cross-section which tapers toward a distal end, the shaft core cross-section being substantially rectangular with an axis ratio of at least 1.5:1 at a distance of 1 cm from the distal end,

wherein the distal portion of the shaft comprises a plurality of and which has longitudinal ribs protruding from the shaft and arranged on a lateral side and a medial side of a ribbed portion of the distal portion of the shaft, the plurality of longitudinal ribs including at least two edge ribs arranged on lateral corners of the rectangular cross-section of the shaft near the distal end,

wherein a whose height of the plurality of ribs continuously increases relative to the shaft core surface from a proximal start of the ribbed distal portion of the shaft to [[a]] the distal end of the ribbed portion of the shaft, whereas a height of the plurality of ribs does not increase relative to a longitudinal axis of the shaft from the proximal start of the distal portion to the distal end of the shaft

the shaft core cross-section at a distance of 1 cm from the distal end portion being substantially rectangular, with an axis ratio of at least 1:4, and, near a distal end, having a rib on each of its two lateral edges, the height of which is on average under 2 mm, the boundary of the shaft core cross-section between the two ribs located on the lateral edges not protruding further laterally from the prosthesis than the two ribs located on the lateral edges.

2. (Currently Amended) The prosthesis as claimed in claim 1, wherein further comprising a side rib provided between the two edge ribs located on the lateral corners edges that protrudes from the prosthesis by [[not]] no more than 2 mm further laterally from the shaft than the two ribs located on the lateral corners edges.

3. (Currently Amended) The prosthesis as claimed in claim ~~1 or~~ 2, further comprising two additional edge ribs a rib provided on ~~each of the medial edges corners of the rectangular cross-~~
section of the shaft.

4. (Currently Amended) The prosthesis as claimed in claim ~~3 1 or~~ 2, wherein a further comprising an additional side rib provided between ~~a rib~~ one of the edge ribs provided on the lateral edge corners and ~~a rib~~ one of the additional edge ribs located on the medial edge corners that protrudes [[not]] by no more than 2 mm in a ventral or dorsal direction from the prosthesis shaft than the respective edge rib and addition rib ~~ribs arranged on the lateral and medial edges.~~

5. (Currently Amended) The prosthesis as claimed in claim 1 or 2, wherein a shaft core cross-section at the proximal end is substantially rectangular with an axis ratio of at least [[1:5]]
1.4:1.

6. (Previously Presented) The prosthesis as claimed in claim 1 or 2, wherein the ribs have roughened surfaces.

7. (Previously Presented) The prosthesis as claimed in claim 1 or 2, wherein a tapering of the core cross-section along a length of at least 4 cm is on average at least $8 \text{ mm}^2/\text{cm}$ of length.

8. (Previously Presented) The prosthesis as claimed in claim 1 or 2, wherein a reduction in cross-sectional dimension in a latero-medial direction of the distal shaft portion along a length of at least 4 cm of the distal shaft portion is on average at least $0.5 \text{ mm}/\text{cm}$ of length.

9. (Previously Presented) The prosthesis as claimed in claim 1 or 2, wherein the rib height increases from the proximal end of the distal portion to the distal end of the distal portion from less than 0.5 mm to 0.5 to 1.5 mm.

10. (Previously Presented) The prosthesis as claimed in claim 7, wherein a tapering of the core cross-section along a length of at least 4 cm is on average over $10 \text{ mm}^2/\text{cm}$ of length.

11. (Previously Presented) The prosthesis as claimed in claim 8, wherein a reduction in cross-sectional dimension in a latero-medial direction of the distal shaft portion along a length of at least 4 cm of the distal shaft portion is on average more than 0.8 mm/cm of length.